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LAND USE SERIES

The Holy Land of Palestine



LAND USE IN PALESTINE

Broadcast by Dr. Walter C. Lowdermilk, Assistant Chief, Scil Conservation Service, U. S. Department of Agriculture, on Thursday, December 21, 1939, in the Department's portion of the National Farm and Home Hour over 90 stations associated with the Blue Network of the National Broadcasting Company.

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## . WALLACE KADDERLY:

Doctor Walter C. Lowderrilk, Assistant Chief of the Soil Conservation Service has just returned from a trip to North Africa and the Near East, including the Holy Land of Palestine. On this trip he investigated the experience of Old World countries in land use - - - - with special attention to the kinds of use which have caused destruction of the soil by erosion. In the great national conservation movement, going on now in the United States, we particularly need to take account of the experience of the people on the older lands -- so that we may avoid their mistakes and profit by their successes. Today, Doctor Lowdermilk will tell us the lessons in land use we may draw from that part of the Old World on which our attention centers at this Christmas season -- - - the Holy Land of Palestine.

## DR. LOWDERLILK:

It is fitting at this season to turn our thoughts to Palestine, that sacred land between Egypt and Syria, no larger than the State of Vermont, which Jews, Moslems, Christians alike look to as their Holy Land. Palestine has been the stage of mighty dramas throughout the ages, — one of the most striking is the tragedy of its wasted lands, a tragedy of the promised land.

Today I bring you two pictures of Palestine; first the Promised Land as it was and second, as it is today, after man-induced crosion has despoiled it. When Moses stood on Mount Nebo about three thousand years age, and looked across the Jordan Valley to the Promised Land, he described it to his people as follows: "For the Lord Thy God bringeth thee into a good land, a land of brooks of water, of fountains and depths that spring out of valleys and hills; a land of wheat and barley and vines and fig trees and pomegranates; a land of clive oil and honey, a land wherein thou shalt eat broad without scarceness; thou shalt not lack anything in it". It was a land of abundant harvests, of 30 to 60 and 100 fold and flowing with milk and honey. With its rainy winters and long dry summers, it was much like our California in the Gold Rush Days.

The occupation and exploitation of the Promised Land began long ago; the forests were cut off, the slopes were cultivated. For a time the lands appear to have been well taken care of by the construction of rockvall torraces, the building of great disterns and reservoirs. Their ruins can still be found today after two thousand years. But when these works of saving the soil and waters were destroyed by invading armies, or were allowed to fall into disuse by neglect, soil crosion began to spread ruin throughout the land. Wars and crosion went hand in hand to weaken the peoples and to destroy the land.

Today the land of Palestine is a sorry commentary on man's domination and exploitation of this once fruitful country. Soils have been swept off the slopes and have lodged in the valleys or carried out to the sea. The bony limestone skeletons of the hills over more than half the area have been laid bare and most of Palestine was turned into a man-made desert, populated by semi-nomads and their herds of goats. The ruins of ancient cities and of thousands of abandoned village sites are impressive but to a soil conservationist, far more impressive are the ruins of the land.

The tragedy of the Promised Land is that it can never be restored to its former condition. It is too late. True, it can be made to support more than its present population as the Jewish agricultural colonies have demonstrated in their splendid work. But I repeat -- Palestine can never be restored to its former condition of the Promised Land. This is the price of soil erosion; a lesson which comes home to us with terrific force.

Last February I saw the destructive process of scil crosion at work as we drove from Jerusalem to Labanon, in a heavy downpour of rain. To a Soil Conservationist, this storm told a tragic story. The wadies were full of roaring waters rushing off the slopes. Going and gone with the rain was the most fertile and finest part of the soil from sloping fields and broken down terraces. Ranging torrents were rushing off the slopes and cutting into the alluvial lands in the valley floors and sweeping the soil out to the sea, changing the famous cobalt blue of the Mediterranean to an ugly ominous brown far out to the horizon.

Soil erosion throughout the centuries has thus changed the character of Palestine. Once it was a land well covered with grass and trees. Beneath this natural covering on the hills was a remarkable red soil called Terra Rosa. Excess rain waters seeped down through the red soils into underground channels in the limestone to gush forth as springs of living waters in the valleys. Some streams doubtless flowed most of the year. The early inhabitants of Palestine found the hill lands fertile. They cleared grass land and forests to cultivate grains, vineyards, and other crops. In Genesis, we are told that Isaac sowed grain somewhere between Gaza and Beersheba and reaped a harvest of an hundred fold. But these soils of Palestine which had been protected for countless years by natural vegetation, were suddenly exposed to the dash of winter rains and the blasts of wind. At first, harvests were bounteous up to an hundred fold as compared to yields nowadays of from three to fifteen fold. Last summer I examined harvests which yielded only 3 to 5 fold, growing on rocky fields.

The tragedy of land mis-use now became apparent to me. Farming of these slopes without terraces to hold back the soil or allowing the terraces to break down was nothing less than suicidal agriculture because it was destroying or had destroyed, the usefulness of the lands of Palestine. It has impoverished the Fellah, or farmer, reducing his ability to provide for his family and to pay his taxes.

Rain waters that seeped into the soil were a blossing, but the unabsorbed waters which we saw sweeping off the best part of the soil from the slopes into torrents and destroying land further down the valleys were carrying a curse as well as a blessing to the land of Palestine. The farmers were permitting a thief to steal away tons of their best soil year after year and to carry it beyond recovery.

I saw another thief of the land at work; namely, wind erosion and its effects of centuries, the same kind of wind erosion that we have in the Groat Plains. Early last spring, in the abandoned Negeb region, I was thousands of tons of soil swept up

as with a broom until they formed a dark wall in the havens as they were blown west-ward to be lost in the sea. Sand and dust storms have spread from the desert into bordering agricultural areas.

This man-induced erosion, where by water or by wind, whose effects I have been studying in the Old World, is not the geologic or natural erosion which sculptured Palestine into its picturesque gorges and valleys. Geologic erosion has been slowly at work but it proceeded no faster than the formation of soil under cover of natural grasses and forests. It is necessary to make this destinction to understand the tragedy of erosion wastage in the Holy Land. When the natural cover of vegetation was removed by the early inhabitants to plant crops or by the overgrazing of their herds, fine soils were exposed to the dash of rain and blasts of wind against which they had been protected for countless years.

That is why in Palestine, as elsewhere, gone with the rain or gone with the wind are the soils which have been countless years in the making. It was this accelerated man-induced erosion, which had impoverished the fields, farmers, and peoples of Palestine throughout the centuries, for Palestine is no longer the Promised Land as Moses saw it.

When Moses wrote the Ten Commandments regulating man's relation to his Creator and to his fellowmen, I wonder if he looked down the ages three thousand years to see how man would despoil the good earth on which he depends for food and change it into man-made deserts. If Moses could have foreseen the appalling destruction of hundreds of millions of acres of the good earth as I have seen it in North China, Korea, North Africa and Asia Minor and in our beloved United States, as well as in the promised land, he might have been inspired to write an Eleventh Commandment to regulate man's relation to the earth, somewhat as follows:

"Thou shalt inherit the holy earth as a faithful steward, conserving its productivity from generation to generation. Thou shalt protect thy fields from erosion and thy hills from over-grazing by thy goats and thy forests from despoilation, so that thy descendants may have abundance forever. If any shall fail in this stewardship of the land, his fertile fields shall become sterile stones and gullies and his descendants shall decrease and live in poverty or perish from the face of the earth."

But man has not generally been a good steward of the land of the earth. Rather, except in a few instances, he has been the exploiter and despoiler.

During three thousand years, the greatest problem of the tillers of soil in Palestine, has been to establish permanent farming on sloping land. At one time, most of the hill lands appear to have been terraced, and to have supported greater populations than exist today. Had the farmers remained faithful stewards of the fields which they inherited from generation to generation, most of Palestine would still be under cultivation. In a few localities, I found terraces for crosion control, that were built doubtless more than two thousand years ago. They had been maintained all this time, and are in use today doing their work splendidly. But in adjoining fields, terraces have been allowed to break down and the soils are weshed off to bedrock. The hungry herdsmen from the descrt have swept down upon the farmers time after time, and have destroyed former civilizations, their agriculture and even their traditions of agriculture. The land, as well as cities and villages, has been left in ruins.

Yet, a portion of Palestine may be redeemed. During 15,000 miles of overland travel in North Africa and Asia Minor, I found the most heartening examples of reclamation of old lands I found among the Jewish agricultural cononies in Palestine.

They included reforestation, draining of malarial swamps, the conversion of arid pasture lands into productive irrigated citrus groves, resembling Southern California. A few young forests on rocky hills, demonstrate the possibility of these barren, hopeless looking hills to grow forests which would provide fuel, timber and work for many people. Palestine has possibilities of being remade into a land of greater abundance but it can never be restored to its former condition as a Promised Land. It is too late.

When I saw great areas which once supported the prosperous and populous cities now depopulated or decadent in the ruins of former agricultural lands, I realized that man's obligation to the earth is not only economic but moral as well. He has a responsibility to his fellowmen of today and tomorrow, to use but not to waste the natural resources.

Out of Palestine have come the most sacred messages to mankind to save and conserve human personality and liberties and out of this country of the old world comes a lesson for us in the new world, to save the land and its resources, so that we may conserve human resources and help bring about "Peace on Earth and Good Will Among Men".

## KADDERLY:

Farm and Home friends, Dr. Walter C. Lowdermilk, Assistant Chief of the Soil Conservation Service, has reported on his recent study of land use in Palestine.